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ABSTRACT

This report is intended to serve as a reference for educators and service providers providing early intervention services and family support to children who have been prenatally substance exposed. The first two sections present information on the extent of the problem noting that 1,200,000 American women of reproductive age use cocaine, alcohol, marijuana, or nicotine in dangerous quantities. Prenatal and neonatal biological risk factors as well as maternal perinatal risk factors are then identified. The following section considers infant neurodevelopmental factors associated with substance abuse. A discussion of environmental risk factors follows including the importance of the postnatal social environment, families with multiple risks, children in foster care, and dysfunctional parent-infant units. Developmental outcomes and behavioral and learning characteristics of the child at risk due to substance exposure are then summarized. A major section considers service delivery issues. These include family centered service delivery, comprehensive coordinated interagency services, early identification of psychosocial and developmental risks, infant-family intervention services, and expanded preschool and elementary preventive education. The final section looks at California intervention programs and research including a "Program Model for Families with Infants and Toddlers Prenatally Substance Exposed," a kindergarten program for 4-year-olds at risk, and a study of educational needs of prenatally drug-exposed children. (Contains over 100 references.) (DB)

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SCHOOLS MEET THE CHALLENGE

Educational Needs of Children at Risk Due to Prenatal Substance Exposure

Marie Kanne Poulsen

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SCHOOLS MEET THE CHALLENGE

Educational Needs of Children at Risk Due to Prenatal Substance Exposure

Written by
Marie Kanne Poulsen, Ph.D.

Produced through a cooperative project of
Sacramento City Unified School District
California State University, Sacramento
and the California Department of Education, Specialized Programs Branch

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1992

SCHOOLS MEET THE CHALLENGE:
EDUCATIONAL NEEDS OF CHILDREN AT RISK
DUE TO PRENATAL SUBSTANCE EXPOSURE

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PREFACE

"Schools Meet the Challenge: Educational Needs of Children at Risk Due to Prenatal Substance Exposure" serves as an important reference for educators and service providers who are faced with an increasing population of children who need comprehensive early intervention services and family support.

Author Marie Poulsen introduces this text with the warning that the impact of substance exposure is only part of the reason for these increased numbers. The text quickly establishes that studies differ on how and to what extent substance exposure may affect a child's development. Substance exposure alone may not lead to a child's being at risk of educational failure, but additional elements that may coexist can increase the risk factors. This document discusses the physical and neurodevelopmental consequences of substance exposure. More importantly, the impact of the child's environment is identified.

Children who have been prenatally substance exposed do not represent a new category of children with exceptional needs. The danger of labeling, stereotyping, and segregating these children cannot be over-estimated. Poulsen concludes in her research that, "Children at risk due to perinatal substance exposure are unique in certain parameters, but as a whole, they are more like other children at risk than different." Educators and service providers must continue to address the unique educational needs of each child rather than focus energies on categorical provision of services.

With a fuller understanding of this population of children and their educational needs, educators and service providers can begin to work more effectively to achieve successful outcomes.

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Marie Kanne Poulsen is a clinical associate professor of Pediatrics at the University of Southern California, School of Medicine, Childrens Hospital Los Angeles. As a licensed clinical psychologist and director of education for the Center for Child Development and Developmental Disorders Childrens Hospital's program, Poulsen has long-term first hand experience in both research and patient care with families and children exposed to substances. She has extensive field knowledge in education with experience as a classroom teacher and school psychologist.

Dr. Poulsen is chair of the Council on Perinatal Substance Abuse of Los Angeles County. Her appointments and memberships include the Los Angeles County Perinatal Substance Exposed Children Interagency Task Force, Los Angeles County Superior Court Task Force on Prenatal Drug Exposure, State Scholars Seminar on Child Care in California, Governor's Invitational Think Tank on Perinatal Substance Abuse, Planning Forum for California State Drug and Alcohol Programs, State Advisory Board for the Foster Care Network, Health Region IX Resource Access Project Advisory Board, and All Babies Count National Advisory Board.

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As educators, we are concerned with the burgeoning numbers of children being labeled as "at risk" due to prenatal substance exposure and acknowledge the need to address their educational needs. This work was contracted to initiate the California Department of Education's exploration of whether these children's educational needs are unique from children who are at risk due to other pre- or perinatal factors. This report supports a major emphasis of the California Strategic Plan for Special Education on the *Prevention* of educational failure and *Early Intervention*. *Schools Meet the Challenge: Educational Needs of Children at Risk Due to Prenatal Substance Exposure* is a valuable resource which supports the ongoing commitment of Departmental initiatives to improve outcomes for students at risk of school failure.

Marie Kanne Poulsen, a highly respected researcher and implementer, has analyzed the current situation in California and has examined models of interagency early intervention and preschool programs that are successfully providing for the educational needs of these children and their families. This document is her report to the California Department of Education and the Special Education Division.

Schools Meet the Challenge: Educational Needs of Children at Risk Due to Prenatal Substance Exposure was developed by Marie Poulsen in conjunction with the following members of the "Substance Exposed Matrix":

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THE CHALLENGE

The rampant use of alcohol and other substances in our country presents a significant threat to the welfare of all children. Of particular concern is the growing use of these substances by women during their child-bearing years. Thousands of children are being born who are biologically at risk due to prenatal substance exposure. The disorganized lifestyle of the drug culture itself offers significant environmental obstacles for the growing child (Sowder & Burt, 1980; Herjanic et al., 1979). When the child has also been exposed in utero to alcohol and other drugs, the developmental risks are compounded exponentially. The developmental outcome for these children placed at risk presents the most important challenge for policy makers and health and human service providers in the nineties. The quality of outcome will depend on the community's response to these children and their families.

The urgency of this problem has sparked media attention. To a great extent, the community's perception of children prenatally substance exposed has been formed by the media who are prone to using eye-grabbing headlines to attract attention. The press has had a lot to say about these children, including:

"... Born to Lose" (*Wall Street Journal*, July 18, 1989)
"... No Hope Babies" (Isikoff, *Los Angeles Times*, 1989)
"... turning up in first and second grade classrooms wreaking havoc on themselves and others" (*Washington Post*, September 17, 1989)
"... the bio-underclass" (*St. Petersburg Times*, September 11, 1989)

Children born to substance abusing mothers demonstrate a continuum of developmental outcomes, ranging from seriously compromised children, to those with milder dysfunction, to many who are healthy intact children.

Children born to substance abusing mothers demonstrate a continuum of developmental outcomes, ranging from seriously compromised children, to those with milder dysfunction, to many who are healthy intact children. Because of this full range of impact, it is exceedingly important that children considered at risk due to substance exposure are not stereotyped, labeled, and segregated as "the crack babies" or "the drug kids."

There is a tenet in child development that says children grow up to be that which we expect them to be. It is another way of stating the power that *expectations* play in the development of the child. It calls for conscientious examination of the community's expectations for children born to drug users and alcoholics.

The dangers of the self-fulfilling prophecy quickly come to mind when the press selectively uses quotes that ignore other more encouraging aspects:

- great variability among children born to substance-abusing mothers
- the strengths in these children
- the significance of the psychosocial environment in the eventual developmental outcome of the child

The greatest danger is that parents, teachers, case workers, therapists, physicians, legislators, and policy makers will stereotype these children. They may therefore stop expecting that *most* infants born to mothers abusing substances have the capacity to develop into healthy children and adolescents. As adults they may become responsible members of the community if appropriate early comprehensive services are provided to the child and the family.

The challenge is how to prevent the child at risk from becoming the adolescent at risk who is more prone to be the substance abuser, the high school dropout, the teen parent, or the juvenile offender.

Children At Risk

Although the focus of this document will be on the educational needs of children identified at risk due to prenatal substance exposure, this issue must be addressed in the context of other social realities facing many of these children at risk, including:

- 645,000 (one in four) preschool children in California live below the poverty line (California Childrens Council, 1988).
- Over 23% of California's children live in single-parent households (Wald, 1988).
- 19% of America's children lack health insurance (National Commission on Children, 1990).
- Between 156,000 and 200,000 children in California were homeless in 1989 (California Department of Social Services, 1989).
- By 1995, it is estimated that 840,000 of America's youth will be in out-of-home placements, including foster care, mental health, and juvenile offender placements (Cimons, 1989).
- One-half million children drop out of school each year (*Pediatric News*, 1989).

Many children born to substance-abusing women face numerous stressful psychosocial realities that compound the biological risks stemming from the prenatal substance exposure. The educational challenge becomes much more than classroom management and academic learning. Research indicates that children of alcohol and drug abusers are ten times more likely to become substance abusers themselves (Lipsitt, 1989). The challenge is how to prevent the child at risk from becoming the adolescent at risk who is more prone to be the substance abuser, the high school dropout, the teen parent, or the juvenile offender. The most critical challenges, thus, center on how to break the intergenerational cycle of substance abuse and how to improve the quality of life for hundreds of thousands of the most vulnerable children.

From this perspective, perinatal substance exposure must be viewed far beyond the biological impact substances may have on learning and development in the growing child. Social, psychological, family, and nonfamily factors must be equally addressed in assessment and service delivery.

EXAMINING THE PROBLEM

Drug use among women of child-bearing years has increased significantly in the last decade (Pinkert, 1989; Kaye, 1989). The major concern of alcohol and drug use during pregnancy centers on the teratogenic or developmental consequences that may occur. In utero teratology historically has focused on dysmorphic effects on the developing fetus; e.g., congenital malformation of the face, genito-urinary, and cardiovascular systems. Recently, focus has shifted to broaden the scope of study to include behavioral and developmental teratology; e.g., the impact of prenatal substance exposure to the later regulation of behavior, attention, and psychosocial development (Weston, 1989).

Postnatal exposure to substances that are inhaled by the child and/or passed through breast milk has also proven to have consequences (Bateman, 1987; Chaney, 1988; Jones & Lopez, 1988; Collins, 1989). Therefore, children who are at risk include those who experience either prenatal or postnatal substance exposure.

Additionally, the serious consequence of alcohol exposure to the developing fetus must not be overlooked. This drug has received less public attention because it is a legal substance. However, alcohol is the most serious drug in terms of developmental outcome. It is a proven teratogen that causes Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) and its use is often associated with other substance abuse. It has been estimated that 5 percent of all birth defects are associated with prenatal alcohol exposure. It is now known that alcohol is the leading cause of preventable mental retardation (*Drug Exposed Infants: Generation At Risk Report*, 1990).

1,200,000 American women of reproductive age use at least one of four major drugs (cocaine, alcohol, marijuana and nicotine) in quantities sufficient to produce birth defects.

A National Institute of Drug Abuse (NIDA) epidemiologist reports that 1,200,000 American women of reproductive age use at least one of four major drugs (cocaine, alcohol, marijuana, and nicotine) in quantities sufficient to produce birth defects (Lipsitt, 1989). The use of crack cocaine has become especially pervasive among youth between 16 and 25 (Placet, 1989). Research indicates that up to 27 percent of inner-city mothers are using cocaine (Chasnoff, 1988). However, there are no comprehensive data on the incidence of substance exposure among infants actually born to these women.

The National Association of Perinatal Addiction Research & Education reports that 11 percent of all newborns are exposed to drugs (Chasnoff, 1988). This figure gives an estimate of over 375,000 infants born each year prenatally exposed to drugs. One California hospital reports incidence as high as 21 percent (*First Annual Symposium of the Perinatal Improvement Network*, 1988). This does not include the 41,000 babies born each year in the United States with fetal alcohol syndrome or fetal alcohol effects. These data can be misleading due to several factors:

Many substance-using mothers are drug free at the time their babies are born. Though the mother is drug free at birth and there is no positive toxin screening for the infant, the mother may have used drugs up to a few days prior to delivery, or the fetus may have already been compromised by the time the mother went off drugs (Zuckerman, 1989).

Not all hospitals test for drug exposure. Public hospitals tend to test more than private hospitals; public hospitals also differ in how closely they adhere to their protocols.

Not all new mothers are tested at any given hospital. Only high-risk mothers are screened. These include those women who have a substance abuse history, drug evidence, no prenatal care or have been involved in a precipitous delivery. When the University of California Medical Center at Davis tested at-risk women, the national average of 11 percent tested positive for drugs in their systems metering the national average. However, when they used a universal-testing protocol, the level jumped to 22 percent.

The estimated number of infants born annually at risk due to substance exposure in California ranges from 10,000 to over 30,000 (*On the Capitol Doorstep*, 1989). Los Angeles County, alone, reported 915 infants prenatally exposed to drugs were born in 1986. By 1989, this number had increased to 6,000 infants born prenatally exposed (Beyette, 1990).

Prenatal and Neonatal Factors

Infants at Risk Due to Substance Exposure

All infants born to mothers abusing substances are at potential risk for developing psychosocial, developmental, learning, and/or behavioral problems. A number will have significant medical problems. However, the prognosis of the individual infant born to a substance-abusing mother varies. There is no typical profile of the infant who has been substance exposed. Each infant has its own constellation of strengths and concerns. Though almost all drugs cross the placenta and reach the fetus, there is no one-to-one relationship between drug type, chronicity of use, and developmental outcome. Probably 70 percent of infants born to chronic alcoholic mothers, drinking heavily during pregnancy, will not have fetal alcohol syndrome (Streissguth, 1989).

There is no typical profile of the infant who has been substance exposed.

A review of the literature of fetal effects due to maternal substance abuse yields a lengthy list with many risk factors common to several classes of drugs. This information and the high percent of poly-substance users preclude the specification of causal relationships between specific drugs and specific fetal risks (Jones, 1988).

Substance abuse effects will also depend on the genetic makeup or inborn resilience of the fetus and the prenatal health of the mother and may vary depending on the developmental stage of the fetus at the time of substance exposure. The outcome may be more dependent on the precise moment at which the substance influence occurs than on the specific type of drugs.

Prenatal Biological Risk Factors

Biological risk factors may stem from genetic predisposition as well as environmental insult. Each trimester brings a set of risk factors that influence learning and development. Thirteen to fifty-six days after conception is the most vulnerable time for structural damage or neurological impact to occur. Damage at this time may result in structural malformations of eyes, kidneys, limbs, heart, and lungs, as well as small strokes in the brain (Dixon, 1989; Briggs, 1986; Hallam, 1989). Research indicates that crack cocaine exposure causes miscarriages in up to 38 percent of cases (Ryan, 1987).

The second trimester also presents fetal risks. Reduced oxygen to the fetus results in intrauterine failure to thrive. Often these infants are born small for gestational age, undernourished, and with reduced birth weight, length and head circumference (Little, 1989; Strauss, 1981; Smith, 1988; Zuckerman, 1989; Burkett, 1990). To be born small for gestational age places an infant at higher risk for developmental and learning problems than being born premature.

During the third trimester, contractions of the smooth lining of the uterus may lead to premature labor and delivery (Chiang & Lee, 1985; Oro & Dixon, 1987; Keith, 1989). Prematurity is impacted by the type of drug used. It is rarely seen with PCP and methadone and is high with cocaine and heroin use. Risk for premature birth is also compounded by the lack of prenatal care and the subsequent increase in infections found among many substance-abusing pregnant women. Approximately 90 percent of the substance abusing mothers at one Los Angeles County hospital had received minimal or no prenatal health services (Legislative Analyst, 1989).

The significance of prenatal care cannot be underscored enough. In 1988 in California, more than 40,000 infants died soon after birth or suffered serious medical complications that could have been lessened or prevented by prenatal care (Nelson, 1987). This alone presents a risk to infant learning and development. Many of these infants were also prenatally exposed to drugs. Research data suggest that cocaine-using pregnant women receiving little or no prenatal care had increased perinatal problems when compared to those receiving comprehensive prenatal care. However, perinatal morbidity associated with prenatal cocaine use cannot be eliminated solely by improved prenatal care (MacGregor, 1989).

Of pertinence to early intervention and school personnel is that birth history, including gestational age and weight for gestational age, can lead to the early identification of children who may have special learning needs.

Neonatal Biological Risk Factors

Perinatal substance abuse places the child in considerable neonatal jeopardy that may impact learning and development.

Infant Mortality.

The death rate of substance-exposed infants is three times that of nonexposed infants.

Sudden Infant Death Syndrome (SIDS).

Estimates of increased risk that a substance-exposed infant will die of Sudden Infant Death Syndrome range from 5 to 20 times greater than a nonexposed infant (Kronstadt, 1989; Bauchner, 1988). SIDS occurs at a rate of 1 to 2 per 1000 in the general population. Recent research cites incidence as high as 170 per 1000 in infants of cocaine users (Jehl, 1989). An association between methadone and SIDS has also been reported (Chavez, 1979; Pierson, 1972). In Philadelphia, passive inhalation of crack smoke by infants has been suggested as a cause of crib death in at least ten cases (Jehl, 1989).

Failure to Thrive.

There is an increase in the number of failure-to-thrive infants among substance-exposed babies. Such factors as gastrointestinal vulnerability, the difficulty the infant has in organizing interactive experiences, depressed interactive behaviors, and lack of maternal emotional availability have contributed.

HIV Infection.

There is an increased risk for pediatric Acquired Immune Deficiency Syndrome (AIDS) or HIV antibodies (Chaisson, 1989). Seventy-nine percent of women with AIDS are of reproductive age. Fifty-two percent have a history of intravenous drug use. The annual number of new HIV infections in newborns due to drug exposure is between 1500 and 2000, mostly in New York, New Jersey, Florida, and California. Sixty-five percent of mothers who are HIV positive will pass it on to their offspring (Koop, 1987). The rate varies because of different patterns of drug use in different communities. Statistics report the growing estimates of newborns testing HIV positive as 1 in every 80 births in New York, 1 in every 200 in New Jersey, and 1 in every 1200 births in California according to a recent three-month blind study. Not all infants who are HIV positive will get the disease. Many have the antibodies that were passed from their mothers' immune systems and will disappear as the infant matures. If antibodies are present after 18 months, then almost surely the virus is present in about 30 to 40 percent of the cases (Bearak, 1989). If the mother transmitted the HIV infection in the first trimester, her infant may be born with microcephaly, a boxlike forehead or other dysmorpthems of the eyes, nose, and lips. This progressive disease leads to delayed motor milestones, delayed language and cognition, and increased motor weakness and neurological involvement (Wayment, 1988).

Sexually Transmitted Disease.

The Center for Disease Control (CDC) reports there is a new silent epidemic of sexually transmitted diseases throughout the U.S. — especially affecting the young, the poor, and the drug user (Scott, 1989). An estimated 30,000 infants will die or suffer birth defects every year as a result of sexually transmitted diseases (Dixson, 1989; Ricci et al., 1989). Most sexually transmitted diseases do not cross the placenta but are acquired during the birth process. However, two diseases are transmitted to the fetus in utero: HIV infections and syphilis. Many inner-city neighborhoods have become permeated with syphilis. Untreated mothers may deliver offspring who may manifest no clinical abnormality for weeks or even months and thus remain unidentified and untreated. Instead, general symptoms of fever, poor weight gain, and restlessness compound an already compromised newborn who may not be treated for syphilis. Later clinical manifestations of untreated congenital syphilis can result in blindness, neurological disease, and abnormalities of the bone. The CDC attributes the increase in syphilis to drug use and lack of access to health care. It has been reported that 25 percent of inner-city mothers who have a positive toxic screening for drugs have syphilis (Scott, 1989). A Miami study reports syphilis in 15.4 percent of infants prenatally exposed to drugs (Burkett, 1990). Fortunately, congenital syphilis can be prevented if diagnosed early in a women's pregnancy and can be treated if the newborn is tested.

The notion of cumulative risk has led to the appreciation that the greater the number of both infant biological and family psychosocial risk factors, the greater the risk to positive developmental outcome.

Maternal Perinatal Risk Factors

There are psychosocial and biological risks characteristic of the pregnant woman using substances that can compound the impact of drugs on the developing fetus (Field, 1980; Burkett, 1990; Finnegan, 1989). These risk factors include:

- poor nutrition
- sexually transmitted disease
- poor maternal health
- HIV infection
- mental illness
- lack of prenatal care
- spousal abuse
- homelessness
- mental retardation
- poverty
- maternal adolescence
- educational limitations
- social isolation
- incarceration
- prostitution

It has become clear that no single factor can predict the developmental outcome of the infant who has been substance-exposed except when extensive irreversible organic damage has occurred (Horowitz, 1987). However, the notion of cumulative risk has led to the appreciation that the greater the number of *both* infant biological and family psychosocial risk factors, the greater the risk to positive developmental outcome.

Infant Neurodevelopmental Factors and Impact on Attachment

Infant Neurodevelopmental Risk Factors

There is a constellation of early behaviors in infants who have been substance exposed that may impact how they learn about and respond to persons, objects, and events and affect the development of attachment to caregivers. The neonatal period is the most vulnerable time because the parent-infant bond is still in the process of formation, and inexperienced parents or caregivers may be overwhelmed with their new responsibilities.

There is a constellation of early behaviors in infants who have been substance exposed that may impact how they learn about and respond to persons, objects, and events and affect the development of attachment to caregivers.

The following neurodevelopmental characteristics can place the infant prenatally exposed to drugs at developmental risk (Chasnoff, 1985; Kaltenbach et al., 1981; Poulsen & Ambrose, 1990; Strauss, 1975):

Poor Feeding Patterns.

The first task of the newborn is to internally regulate eating and sleeping patterns. Many neonates who have been substance exposed have difficulty in sucking, eating in a reasonable time, and retaining food. Some infants may take over an hour to feed, then spit it all up, and start to cry once more. This gastrointestinal sensitivity can set up the infant for failure to thrive and the preschooler for an increased number of reported "tummy aches."

Poor Sleeping Patterns.

Establishing a sleeping schedule indicates the infant is learning to regulate behavior. Many infants who have been substance exposed have difficulty establishing sleep patterns, not sleeping through the night until they are close to one year old. This is an added stress for mother and child.

Behavioral Extremes and Poor Control of States of Alertness.

A sequence of states of alertness is expected in all newborns, including sound sleep, light sleep, drowsy wakefulness, calm focused alertness, fussiness, and crying. This is another indication of the infant's capacity to regulate the behavior. The newborn usually experiences three to five minutes an hour in quiet alertness. The high risk infant who is unable to modulate these states may go from deep sleep, to crying, to deep sleep after being fed. This eliminates the important time of calm, focused alertness that allows the infant to relate to objects and with the parent.

Another risk factor related to an infant's state of alertness can be seen in the hypervigilance of the infant prenatally exposed to PCP. This infant may be alert for extensive periods of time. However, the calm focus needed to more completely engage with caregivers is lacking. Instead, the infant's eyes may dart all over the parent's face without making the quality eye contact needed for good bonding.

Easily Overstimulated.

Many infants who are substance exposed are easily overstimulated by being uncovered, touched, dressed, bathed, or picked up. Noise, movement, or lights may be enough to stimulate excessive, high pitched, haunting cries. Parents may read these cries as "leave me alone" cues, instead of "I need help" signals.

Difficulty in Consoling Self and Being Comforted.

The infant who can modulate behavior is frequently able to control beginning whimpers and develop a calm behavior. High-risk babies who are substance exposed may have all their whimpers develop into full howls of distress and, for some, comfort by others may be only marginally effective. Many babies who have been substance exposed do not respond to repositioning, cuddling, stroking, or pacifiers as means of being comforted.

Depressed Interactive Behaviors.

All infants are born with certain behaviors that promote interaction and attachment to their parents. These include eye contact, cuddliness, throaty sounds, smiling, and following objects with their eyes. These behaviors often are found to be more muted and more sporadic in the baby prenatally exposed to drugs. Babies who give fewer cues receive less attention from caregivers. Consequently, the typical mutual smiling of the six-week-old or mutual cooing of the ten-week-old may be weak or absent.

Decreased Quality of Movement.

A decrease in the quality of movement may be observed in the infant's attempts to bring the hand to the mouth or grasp an object. Oculomotor coordination in following a slowly moving object may be poor. The infant at risk may follow objects in a jerky peripheral manner rather than with smooth central pursuit. Often, there is a loss of visual regard as objects pass the midline in the field of vision.

Increased Tone and Tremulousness.

An increase in tone is seen in many infants who have been substance exposed, resulting in increased arching when parents try to nestle their babies close to their bodies. Reaching behaviors may be diminished if the infant can only bring the shoulders forward with the help of an adult. All infants show a certain amount of tremulousness, particularly after crying and in the drowsy state. However, infants who have been substance exposed may also show tremulousness in all states, including calm focused alertness. Jitteriness and excessive startling may persist through the first year of life.

Poor Organization of Behavior.

With maturation and experience, the patterns the infant uses to respond to the world become smooth, efficient, and organized. This allows an involvement with the world in an increasingly effective and more complex manner. The infant who has been substance exposed may experience difficulty when an effort is made to combine sequences of behavior.

Typically the one-month-old infant is able to nurse the bottle or breast and in the process seek eye contact with the caregiver. This is an important part of the bonding process. The infant at risk may lose the nipple while searching for social

contact, then have some difficulty in finding it and exercising the smooth coordinated sucks that are part of a one-month-old's repertoire.

The two-month-old infant who is nursing usually stops at the sound of the caregiver's voice, smiles, and easily resumes nursing. For the infant who has been substance exposed, prolonged immaturity of the central nervous system may preclude resumption of the nursing patterns in an easy manner after social distraction.

The nonexposed three-month-old sees an object moving, controls behavior with a calm focused alertness, follows the object, and thus learns about the world. The infant who has difficulty organizing or modulating the behavior, may become overly excited at the visual stimulus and, instead of becoming calm, start to flail the arms and legs precluding efficient development of the important learning strategy of scanning, focusing, and following.

Impact on Attachment

The most significant impact of these at-risk behaviors is the role they may have in the development of the caregiver-infant relationship. Interactive behaviors of these infants may be fewer, sporadic, and more muted than expected. The infant prenatally exposed to drugs may respond differently to nurturing behaviors than the birth or foster mother expects. The infant may:

- cry when sung to
- extend the body rather than molding when the mother tries to cuddle
- tense when held
- refuse food offered
- ignore consolation
- smile less readily
- avoid looking at the mother's face

These neurodevelopmental behaviors are due to the prolonged immaturity of the central nervous system. When an infant responds to nurturing in these ways, it can prove difficult for even the most experienced mother. When the mother is young, anxious, inexperienced, guilt-ridden or drug-involved, it can be absolutely devastating. Without intervention, the development of attachment between infant and parent can be seriously impaired.

Typically a ten-month-old child hears the mother's voice or footsteps in the morning and, by the time she enters the room, has pulled to a stand and is leaning out of the crib in eager anticipation. The baby with poor attachment may neither read signals nor respond to them in this manner, but remain lying in the crib until the mother is standing by it. The significance of footsteps or meaning of human voice has not been learned.

In some poorly attached infants and toddlers, there may be an overall decrease in the use of significant adults as sources of solace, play, and object attainment.

When an infant responds to nurturing in these ways, it can prove difficult for even the most experienced mother. When the mother is young, anxious, inexperienced, guilt-ridden or drug-involved, it can be absolutely devastating.

The detrimental effect negatively impacts the development of attachment and thus the development of self-identity and self-esteem.

Infants and toddlers exposed to drugs often use fewer vocalizations or gestures to indicate "lift me," "I want," "I need," or "come here." The poorly attached toddler may stand by the refrigerator and loudly cry, rather than pointing, pulling, or using the words to designate desire.

If there have been many caregivers in the absence of the parent, the child will not show anxiety, separation fear, or initial vigilance to strangers which are seen after a child becomes closely bonded to the primary caregiver — usually starting around six to eight months.

Some children without a consistent, primary caregiver develop indiscriminate attachments to all adults who can meet external needs. However, only discriminating attachments to particular adults meet the internal needs that lead to a sense of self-identity and the development of self-esteem.

The poor organization of early auditory processing and attachment experiences leave many young children who have been substance exposed with deficits that interfere with the usual ways of developing and guiding behaviors. For some children, there is a significant lack of response to the usual verbal prohibitions and encouragements. By the time a child is a preschooler, it is expected that the human voice has significance as a director of behavior. In fact, most two-year-olds know the meaning of "the look." But for a child who has been prenatally exposed to drugs, a more primary means of communication to elicit the attention and response may be needed for a much longer time — including close proximity, touch, and direct eye contact — before verbal guidance is given.

Of even greater significance to a child's well being is that there is not the usual response to recognition of accomplishments or verbal praise. Typically, young children demand attention to their accomplishments from the adults in their world, and, when praise is forthcoming, they beam with pleasure. Many poorly attached children merely look at their "masterpieces" and make no attempt to use nearby adults to recognize their accomplishments. Many such children ignore volunteered praise. However, the close proximity between the caregiver and child with direct touch and eye contact can make the child aware that accomplishments are being acknowledged.

It is hypothesized that the poorly attached child either did not get the cuddling, stroking, eye contact, and verbal communication from a consistent caregiver in the early months or because of the child's immature nervous system, nurturing actions that give the voice later significance were not incorporated. The detrimental effect negatively impacts the development of attachment and thus the development of self-identity and self-esteem. The infant at risk then becomes the child at risk who lacks the internal resources needed to cope with learning and behavior demands.

Environmental Risk Factors

Importance of Postnatal Social Environment

The future success of these children is encouraged by the body of literature that supports the contention that the eventual cognitive and social outcomes for children at risk can be positively influenced by an enriched postnatal social environment (Bradley, 1989; Illsley, 1989; Lipsitt, 1988; Sigman, 1982).

- Infants prenatally exposed to drugs are at biological risk and are more vulnerable to adverse environmental influences than are non-risk babies (Gorski, 1979).
- The single most important influence on developmental outcome of the child with high needs and low threshold is the psychosocial environment in which the child is reared.

...the eventual cognitive and social outcomes for children at risk can be positively influenced by an enriched postnatal social environment.

Children of substance-abusing mothers tend to have more people taking care of them and more changes in placement than other children. Insufficient consistent mothering and multiple placements in the foster care system are the most significant deterrents to healthy mother-child relationships for young children prenatally exposed to substances. Often, they have not had the opportunity to develop trusting relationships with adults.

It is only through trusting consistent relationship over time that attachment can occur. The "felt security" from healthy attachment provides the growing child with the emotional fuel needed to initiate and to learn. Felt security provides the coping skills needed to persist in difficult tasks, to pursue goals not immediately attainable, and to handle internal frustrations and external stresses.

All major disruptions in a young child's life (e.g., removal from the family or changes in foster placement) result in crisis. Much acting out behavior seen in the multiple-placed child who has been substance exposed is a direct result of being in chronic crisis. The issue is not one of attachment versus nonattachment, such as seen in the child with autism, but rather is an issue of poor or indiscriminate attachments to other human beings. For poorly attached children, human beings are not emotionally available to meet internal needs. Consequently, there is a lack of development of a sense of self-identity and self-esteem.

At-risk environments are those that do not provide for the special psychosocial and learning needs of children at risk. Characteristics of an environment at risk include dysfunctional families, inconsistent multiple caregivers, emotionally unavailable parent figures; and disorganized, chaotic influences that negatively impact a child's capacity to bond to a single significant person, to learn to modulate behavior, and to develop internal coping mechanisms and a sense of self-esteem.

In addition to these specific factors, general environments that can place a substance-exposed child at a psychosocial risk include families with high needs and substance abuse not receiving intervention services, overwhelmed foster parents, group homes, and under-supported grandparents.

Families with Multiple Risks

Drugs are used by pregnant and parenting women in all socioeconomic groups. Substance abuse within any family places those children at risk. The risks to the healthy development of children in substance-abusing families are compounded by poverty, poor nutrition, education or intellectual limitation, and/or social isolation. Substance-abusing mothers who are identified in our society tend to be women of poverty. It is estimated that poor minority women are ten times more likely to be reported to child protective services than are middle-class women abusing substances (Rist, 1990). These mothers at high risk, who are using or have used drugs, have several of their own hurdles to deal with and may need extra help in parenting their children. While it is important not to stereotype pregnant and parenting substance-abusing women, it is extremely important to appreciate the challenges faced by many (Ambrose & Poulsen, 1990; Cuskey, 1982; Coppolillo, 1975; Mondanaro, 1977; Tucker, 1979).

- Most are single parents or with partners who use drugs who offer little financial, emotional, or social support.
- Almost all have a history of physical or spousal abuse, particularly mothers who use PCP who frequently report awakening battered and bruised without memory of assault. Battered women are four times more likely to delivery low birth weight babies. Battered women shelters are reluctant to accept women using drugs.
- Many have lacked good parenting models. A high percentage had been in "out of home" placement or grew up in dysfunctional substance-abusing families.
- Many are lonely and socially isolated because their friends have remained part of the drug culture and to stay clean they must "go it alone."
- Many are dealing with issues of guilt, depression, separation, and loss due to the number of their children not being raised by them and the number of family members or friends who died violently as part of the drug culture.
- Many are experiencing difficulty in becoming and remaining drug free, including agitation, craving, insomnia, and irritability.
- Many are naive about how children grow and develop. They have difficulty interpreting their baby's behavior, project intention from birth ("Baby is mad at me"), and think good mothers don't allow their infants to mouth objects, to be messy, or to play with their bodies. Unrealistic expectations and inappropriate discipline can be the result.

The birth of a new baby provides many mothers with the "window of opportunity" for change from old drug habits, but they need considerable support to get drug treatment, to develop a sense of self-identity, and to provide the parenting skills needed to deal with their high-risk babies.

Every effort needs to be made by the community to support the 'infrastructure' of family life.

A 1989 report from the Erikson Institute in Chicago (Garbarino et al., 1989) studied how children learn to cope in difficult environments that are abundant with drugs, crime, and poverty. The three elements critical in order for children to cope with extreme stress are (a) parent-child attachment, (b) parental self-esteem, and (c) stability in shelter, food, and medical care. Each of these elements is in jeopardy in the lives of women who are poor, single, substance abusing, and are raising high-needs children without resources. Every effort needs to be made by the community to support the "infrastructure" of family life. The child can cope with a difficult environment only to the extent to which the mother is not stressed beyond her own capacity to manage. Fundamental intervention services need to address mother-child interaction, maternal sense of self-identity, and the basic, physical necessities of life. Services may include drug recovery, vocational training, housing, self-determination in interpersonal relationships, reparenting, home management skills, and parent effectiveness.

Children in Foster Care

The foster care system in California is in crisis. Up to 90 percent of children referred to protective services are for drug-related reasons. Presently, there are 80,000 foster children in California and too few foster families available to care for them (Childrens Research Institute of California, 1991). Infants and young children are the fastest growing group among out-of-home placements. In 1989, more than 18,000 children under the age of three were residing in foster family homes, group homes, and shelters. This is an increase from 9,500 in 1986 alone (Garcia, 1989; McCathren, 1989).

Infants who have been substance exposed tend to be placed in foster care earlier, stay longer, and have more shifts in placement (Fanshel, 1975). Seventy percent of these infants are still in the system five years later. It has been reported that as many as 80 percent of infants and children identified as substance exposed may live in foster care (Feig, 1990).

At a Los Angeles shelter, where there were 42 children from two-months- to four-years-old, 20 children were victims of multiple placement. Those 20 children (who had a mean age of 13 months) had been in 64 placements since birth. It is not unusual to see a three-year-old with substance exposure who has had three or four placements. This may create more problems in childhood than the substance exposure itself.

Foster mothers often are getting more high-risk infants than they can handle. Even though they may do a fine job of meeting physical needs, some have difficulty meeting the special demands and emotional needs of these high-risk children.

The quality of early infant-caregiver interactions and subsequent attachment has long-term consequences in the development of later social and cognitive skills

Now more than ever, there is an increase in children being raised in group homes of six to fifteen with multiple shifts of caregivers. Since minimum wage is often the pay, the turnover of caregivers can be an added detriment to the development of wholesome attachment in children. Some are licensed to serve children under two years of age, causing a shift of placement for a child at a most critical stage.

It is critical to the welfare of all foster children that every effort be made to ensure that each child experiences only *one* out-of-home placement until reunification with family or relinquishment for adoption occurs (Poulsen et al., 1988). Recent legislation in California strongly supports the provision of services to preserve the integrity and quality of family life and to avoid the costly and traumatic separation of children and youth through residential placements. The decision about a child's placement needs to include the ability of the foster family to meet the special needs of the child at risk. Foster families may need added community resources to provide support for respite care, child care, transportation, child mental health services, developmental intervention, and physical health maintenance.

Grandparenting Children at Risk

Never before have so many grandparents assumed full responsibility for raising so many children. It has been reported that in some drug impacted urban neighborhoods, up to 70 percent of day-care and after-day-care children are being raised solely by their grandparents (Gross, 1989). More outreach, emotional, and financial support needs to be offered to these "second time around mothers." These children can be exhausting, and special at-risk needs may go unmet.

Dysfunctional Parent-Infant Units

Central nervous system (CNS) dysfunction/immaturity from drug exposure and an unstable disorganizing family environment with a mother who is physically and emotionally unavailable or overwhelmed by her own unmet needs, offer the infant many obstacles to healthy development beyond the impact of the actual drug exposure.

The risk of creating a dysfunctional parent-infant unit increases to the extent that each member of the dyad is individually at risk. An infant with disorganized and/or depressed interactive behaviors needs a protective organizing environment with a long-term, loving, responsive, emotionally available caregiver who can help the infant learn to compensate for neurodevelopmental vulnerabilities. The quality of early infant-caregiver interactions and subsequent attachment has long-term consequences in the development of later social and cognitive skills (Arend, 1979; Bell, 1970; Lieberman, 1977; Matas et al., 1978).

Mothers who are high-risk and substance abusers are less attentive, responsive and elaborative with their infants (Mondanaro, 1977; O'Connor & Kosari, 1989). Without intervention services, a cycle of infant and maternal passivity is developed, resulting in a poorly attached, insecure child at risk. There is significant danger of severe social/behavioral impairment if prenatal substance exposure is compounded by continued distortion of the early mother-infant relationship. It has become clear that early identification and early preventive intervention is essential to ensure positive outcomes for infant-parent units at high risk.

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Developmental Outcomes

Much of the behavior seen in preschool and kindergarten children who are at risk due to substance exposure results from a constellation of psychosocial and biological risk factors — rather than the effects of drugs per se. There is a compounding effect of the neurobehavioral immaturities and the impact they have on early mother-child interaction which influence the development of attachment, learning, and coping strategies in the child. Parental influence on behavior always remains a significant variable.

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In terms of development, there will be a continuum of outcomes (Barth, 1991; Chasnoff, 1988; Howard et al., 1989; Kronstadt, 1989; Madden & Payne, 1986; Poulsen & Ambrose, 1990; Schnoll, 1986; Weston, 1989):

The child with developmental disabilities.

A number of children, prenatally substance exposed, will have significant developmental disabilities including mental retardation, seizure disorders, cerebral palsy, or anomalies such as close-set eyes and low-set ears. The range of congenital malformations noted at birth is 2 to 17 percent of all births (Ash, 1977; Burkett, 1990). This represents a higher level of fetal susceptibility for, as well as maternal infection, age, and general prenatal health (Schnoll, 1986). These are the children with disabilities who will need special education and developmental services. Early intervention services are in place primarily through the Department of Developmental Services and the Department of Education. Services include early identification, early intervention, and the child/family service plan. These services need to extend to regular education and throughout the child's school life.

The intact child.

Most children prenatally exposed to alcohol and other drugs will not be identified by service delivery systems. Included in this group are the thousands of babies born to healthy mothers who stopped using substances once they realized they were pregnant.

In addition, many children born to mothers who used drugs throughout pregnancy show no indications of neurodevelopmental vulnerability, and countless others judged to be at risk in the infancy period develop into healthy children with intervention and support services. Prenatal substance use is a risk factor not a risk indicator. (Kronstadt, 1989; Imaizumi, 1990; Tronick, 1990)

The child at risk.

The majority of identified children at risk due to substance exposure have cognitive abilities within normal limits with a range of learning, behavior, and psychosocial neurodevelopmental immaturities that place them at risk of not achieving school success and positive developmental outcomes. Studies of

Prenatal substance use is a risk factor not a risk indicator.

toddler, preschool, and school-age children, including those exposed to methadone (Strauss, 1975), PCP (Howard, 1985), heroin (Wilson, 1979), alcohol (fetal alcohol effects) (Streissguth, 1989), and cocaine (Howard, 1989) show the following characteristics:

- within normal limit intellectual abilities
- greater task-irrelevant activity
- more organizational and motoric inhibition problems
- less persistence than nonexposed peers

Researchers are postulating central nervous system dysfunction as a significant factor of developmental outcomes for those children identified at risk. Behaviors observed in those children identified at risk are similar to behavior of children with "neurological soft signs" (Kronstadt, 1989). The developmental outcome then for the individual child at risk appears to depend on:

1. The extent of CNS involvement; i.e., the number and degree of neurobehavioral risk characteristics
2. The degree to which the postnatal social environment helps the child learn to organize the behavior and to develop the coping mechanisms needed to compensate for the neurodevelopmental immaturities and to deal with the stresses of being a disorganized child.

The Child At Risk Due to Substance Exposure

Not all children prenatally exposed to drugs will be at risk for developmental, learning, or behavioral difficulties. Even among those identified to be at risk, great variability can be seen. Many children at risk due to substance exposure can be described as "low-threshold" disorganized children who are hypersensitive and hyperreactive to sensory and emotional situations, and who need a protective responsive environment in order to thrive. Many such children fall between the regular education and special education cracks. They may not be eligible for special education services, but have special learning, behavioral, and psychosocial needs that must be addressed.

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Low-threshold children show uneven neurologic maturation in their capacity to modulate their own behavior in response to the social and physical environment. Their disorganized, often out-of-bounds behavior — seen by many as destructive and intentional — stems from an overload of sensory or emotional input to the central nervous system. Children with low thresholds can be so hypersensitive and easily overstimulated that they experience lives full of stress. What does not phase another child, may be acutely felt and inappropriately responded to by the low-threshold, disorganized child. And, the child becomes more vulnerable to the extent that the needed coping mechanisms are not developed to deal with internal disorganization and a stress-filled environment.

There are other children who share a different set of vulnerabilities that place their emotional-social health at risk. These children are more constricted. They tend to be under-identified because they are described as "good, easy babies and children." The red flags are that they are "overly compliant," can not make choices, and initiate little — some see these children as clinically depressed. The picture includes the one-year-old who does not jump up in the crib in the morning to greet the day or the caregiver and the four-year-old who stands on the sidelines day after day and watches peers play.

It appears that the influence of drugs on central nervous system functioning creates a wider range of variability in the child's capacity for:

Organization of play and daily living activities.

The child at risk may be more distracted and less focused than peers and show less self-initiation and organized follow-through in play, learning, and self-help activities.

Precision and direction of movement.

The child at risk may have difficulty with spatial relations and/or motor coordination required in pencil use, block play, shoe tying, and bike riding.

Learning continuity and learning strategies.

The child at risk may show sporadic mastery — learning strategy/skill/concept is mastered one day and then needs to be relearned again and again.

Sense of self-identity and interactive behaviors.

The child at risk may have very low stress thresholds, be overreactive to stress, and lack the close relationships to adults that allow him to use adults as sources of emotional comfort, security, object attainment, and information.

Behavioral Characteristics

- Exhibits behavioral extremes
- Easily overstimulated
- Low tolerance for change
- Constantly tests the limits
- Difficulty in reading social cues
- Difficulty with peer relationships

The child at risk may appear as a highly active, insecure, emotionally intense child who has difficulty persisting with activities and who is vulnerable for antagonistic relationships with peers.

The child may become easily overstimulated by too many people, too many things, or too much noise and movement. The behavioral extremes seen in early childhood manifest in a different form. The child at risk may go from lethargy to aggression with no obvious precipitating factors. Modulation of emotion remains a difficulty. The child may not feel merely unhappy, but devastated — not merely petulant, but enraged.

Small, expected changes in routines may cause a change in behavior, and sudden unexpected changes can prove to be devastating. Interrupted play or transition time in a classroom may prove to be a challenging time for the child and the teacher. Two-or five-minute warnings prior to these changes have proved to be helpful for some of these children with low thresholds at home and at school. The inability to respond to social cues often results in the child barging in on peer situations before a welcome is extended. Impulsivity may lead to acting before examining what the consequences may be. "Turn taking" may be a difficult concept to understand. All of these characteristics combine to make the child at risk very vulnerable in peer situations. Social rules may not be learned in the incidental manner of most children, but may need to be explicitly taught.

Another characteristic seen in some children at risk is the constant testing of limits. Disorganized children may not learn from yesterday's experience, but continually need to be taught and retaught social rules and expectations. They need relearning experiences rather than punitive consequences.

Learning Characteristics

- Language delay
- Sporadic mastery of perceptual-spatial-motor tasks
- Inconsistent problem-solving strategies
- Auditory processing and word retrieval difficulties
- Decreased capacity to initiate and organize play
- Decreased focused attention and concentration

The ability to perform motor skills at a maximum level may be compromised for the child at risk. It may take the child longer to learn how to stack blocks, do a puzzle, print name, tie shoes, and ride a bike. The task may be mastered on Monday and forgotten on Thursday. Or, as in the behavioral domain, the child may have "good days" where everything comes together smoothly and "bad days" where everything falls apart.

Problem-solving strategies may also vary from day to day — the child may show good visual scanning and organized trial and error strategies today and be at a loss in the same situations on subsequent days.

Likewise, in the understanding of spatial, numerical, and color concepts and in learning to read, sporadic mastery may also be evident. Some children show difficulty in word retrieval, the visual/auditory processing skills of memory, and sequencing a story or decoding a word.

There will be added stress in the child's life if parent and teacher expectations are based on "good day" performance and all other behaviors are interpreted as willful or as resistance on the part of the child, rather than as an indicator of CNS dysfunction.

The child at risk may have difficulty in independently initiating, organizing, and sustaining a sequence of experiences in work and play. When overstimulated, unfocused wandering and inattentive handling of a variety of toys or materials may become manifest. Too many choices appear to immobilize a child who is disorganized. The child may be at a loss on the playground or in large unconfined spaces. Close guidance by an adult figure can help the child organize experiences. Language can be used to help the child decide how to focus, what to do, and how to follow through. Reduced auditory and visual stimulation and confined spaces also can help in organization of play and work.

Service Delivery Issues

Long- and Short-Term Goals

The long-range goal of comprehensive service delivery to children exposed to substances is to break the intergenerational cycle of substance abuse. The goal is to provide the resources that will enable children at risk to develop the academic skills, critical thinking, judicious decision making, and meaningful relationships needed to become responsible and personally fulfilled members of the community.

The immediate goals of infant intervention, preschool, and elementary school programs are to reduce the impact of neurobehavioral and psychosocial risks of early childhood by helping the child develop the readiness dimensions needed to prevent failure and to ensure positive developmental outcome.

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Basic Issues

There are several fundamental issues regarding the development of children at risk that directly impact service delivery to those who have experienced substance exposure:

- Although the range of developmental outcome is diverse, many children who have been exposed to substances are biologically at risk for emotional, psychosocial, behavioral, and learning problems.
- The postnatal psychosocial environment is the single most important influence on the developmental outcome of the child at risk.
- The emotional and social well-being of the child is the foundation for later developmental outcome. The emotional and social well-being of the young child is directly related to quality of parent-child relationship and the well-being of the family as a whole.
- For the child at risk, educational intervention provided at age five comes too late.
- Many children at risk fall between special and regular education services. Their at-risk behaviors may not qualify them for special education, but the children will present learning and behavioral characteristics that place them at risk for failure in regular education without extra support.
- The education system alone cannot meet the special needs of these children at risk and their families.
- Health, mental health, social, developmental, and educational services provided by the community for children at risk and their families are fragmented.

Public schools can no longer afford to operate in isolation or in a vacuum. The plight and outcome of children at risk is the responsibility of the total community.

Sound intervention principles demand that the components of quality service delivery to children at risk must include:

- Family-centered service delivery
- Comprehensive coordinated interagency services
- Early identification of psychosocial and developmental risks
- Infant/family intervention service
- Expanded preschool and elementary preventive education services

The changing individual and family characteristics of children now entering school systems in California call for a reassessment of the school's role in the community. Public schools can no longer afford to operate in isolation or in a vacuum. The plight and outcome of children at risk is the responsibility of the total community. The changing mission of the school calls for educational leadership in the development of collaborative relationships with city government, business, health, and human service agencies in order to provide early comprehensive interagency services to the community's children with substance exposure and their families.

The public schools are in a position to provide insight to the rest of the community about the unmet needs of children at risk. These unmet needs will provide the foundation for a given community's plans for policy and service delivery development.

Family-Centered Service Delivery

The importance of family involvement in the educational process has been brought into a new focus in the last decade. Recent federal and state legislation has reformulated the role of the parent-school partnership in the provision of special education services to children with disabling conditions. These pieces of legislation recognize that services to young children cannot be effectively provided without including the family as an essential part of the service plan. This notion of parent involvement needs to be extended to all children at risk whether they are in special or regular education programs and for the duration of the school's involvement.

- The school needs to take a proactive role in helping the family understand the child's special emotional, psychosocial, and learning vulnerabilities as they relate to the learning process.
- The intensity of the school's involvement in parent/family service will depend upon the age and needs of the child, as well as the needs of the family. The local educational agency (LEA), providing direct special educational infant services, will have significantly more parent involvement.
- The school's outreach strategies will need to vary in order for effective relationships with diverse family constellations to develop. Primary caregivers may include single parents, recovering parents, foster parents, extended family members, and group home caregivers from varying cultural, racial, and religious backgrounds. Each family constellation has different inherent needs.

More sensitive parent outreach programs are needed to engage substance-abusing parents into a school/home partnership. Parents with substance addiction may be extremely wary of the school because of their own poor school history. School personnel may need training in how to develop a relationship and lines of communication to sensitively and effectively work with this population which has experienced little respect from professionals, but which has a great deal to contribute regarding the special needs and strengths of the child and family.

The California Department of Education emphasizes the key role the family plays in living with and supporting the child who needs special assistance:

> *The family members are the ones who live with the child "day in and day out." They are the ones who can enrich the child at home and in the community. They are the ones who best know the child and can provide the environment to make it all happen. They need assistance in learning special techniques to use when supporting their child, and they need to know how to follow through in the home with interventions which are implemented at school. The combined interventions approach for both the child and family is necessary for the infant and preschool-aged child* (Campbell, 1990).

Strategies used by some school districts to develop and enhance school/parent involvement include:

- comprehensive parent interviews focusing on the concerns and viewpoints they have about their children's needs
- home visits by teachers
- parent participation in school projects/programs
- parent support groups
- parent education based on parent needs assessment
- provision of transportation for parent participation activities
- provision of child care during parent participation activities
- newsletters to parents
- phone communication from teachers
- co-location of community family services at school site
- interagency case management — coordinated planning with parent for services offered to child and the family
- comprehensive coordinated interagency services

Comprehensive, Coordinated Interagency Services

Services to substance-abusing mothers and their children can literally involve all service systems: mental health; drug and alcohol; Department of Developmental Services; Department of Health; Women, Infant, and Children Program (WIC); Child Protective Services; Probation; Head Start; and Education. Because of the lack of funds, different funding sources and restrictions, and minimal funds available to coordinate a child/family service plan, the accessibility and availability of services

School system professionals will be involved with more agencies than ever before. It is clear that the only way the needs of children exposed to substances will be met is through interagency collaboration.

to substance abusing mothers and their children are extremely variable and fragmented in most communities. Often, these mothers may have difficulty organizing their lives, lead fragmented lives, and receive fragmented service delivery. Service delivery to these families must be drastically changed if the intergenerational cycle of substance abuse is to be broken.

School system professionals will be involved with more agencies than ever before. It is clear that the only way the needs of children exposed to substances will be met is through interagency collaboration. P.L. 99-457 certainly sets the stage for family focused, interagency collaboration in quality service delivery. The good news is that the education system won't be expected to "do it all." The challenge is how to efficiently and effectively structure true interagency collaborative efforts, where the permanent placement plans of Child Protective Services, the individual program plans (IPP) of regional centers, the individualized education programs (IEP) of special education, and the treatment plans of mental health are shared or planned together to provide a comprehensive, unified family service plan. Obstacles to be faced include such issues as territoriality, mutual trust, confidentiality, etc. This is probably the most significant social and educational policy of the 1990s: providing quality service delivery to children who have been prenatally substance exposed.

The school district can provide the participatory as well as a leadership role in the coordinating bodies in the community. The exact nature of the school's role will depend on what has already been developed within the community. Different (and in many instances, several) coordinating bodies are available in most communities. Private and state funds have contributed to the development of:

- Substance abuse coalitions
- Child abuse councils
- High-risk youth projects
- Early intervention coordinating councils
- Foster care networks
- Children's roundtables

The local education agency can provide an active role in these coordinating bodies and take the leadership in forming a coalition if their community is lacking a coordinating body. The role of coalitions is to address community social policy issues as well as service delivery needs. Outcomes of interagency coalitions can include:

- Coordinated community education
- Network referral sources for continuum of care
- Interagency staff training
- Coordinated family outreach
- Common intake form for all community service agencies
- Co-location of services
- School/business partnership
- Transition plan development

- Comprehensive, coordinated case management
- Comprehensive community survey of service needs and gaps
- Joint city government/school board meetings
- Special projects

Early Identification of Psychosocial and Developmental Risks

It has been conclusively recognized that "early identification and intervention" are the key components of infant and preschool programs in California (Campbell, 1990). Children at risk due to substance exposure are similar to other children at risk for learning and developmental problems (Barth, 1991). Often they have difficulty in their capacity "to relate to others, to control impulse, to experience positive self-esteem, to develop the ability to focus attention, to concentrate, and to plan" (Schrag, 1988).

Children at risk often have difficulty obtaining needed services. A child who is disorganized may do very well when assessed in a structured situation with one person and few distractions. High scores on a test in this situation may give a valid picture of a child's competence, but it may belie how a child is able to function in a group situation with many distractions or how the child deals with the stresses in life on any given day. This underscores the importance of including the classroom teacher and parents as members of the assessment team for child evaluation and program planning.

A seminal issue paper on mental health roles in the implementation of Part H of P.L. 99-457 addresses the following concerns regarding quality service delivery to young children at risk (Schrag, 1988):

> Delays in psychosocial development currently is not, but must be, accorded the same attention as delays in other areas of development.
>
> Diagnosis of mental and emotional risks in young children is poorly advanced, and very real problems attend the labeling of young children.
>
> Supportive, proactive mental health services to children at risk and their families are needed.

The diversity and complexity of children at risk due to perinatal substance exposure calls for the need for multidisciplinary assessment, program planning, and service delivery. Infant and child assessment protocols must go beyond developmental/psychometric testing in order to capture qualitative psychosocial and neurodevelopmental characteristics that place infants and children at developmental, behavioral, and learning risk. Assessment protocols should include observations of the child's capacity to organize play, relate to primary caregivers, and the capacity to cope in peer situations, adaptively express feelings, and respond to verbal guidance and praise. Thus, assessment protocols should include parent interview, mother-child interaction, free play, and peer interactions.

Infant and child assessment protocols must go beyond developmental/ psychometric testing in order to capture qualitative psychosocial and neuro-developmental characteristics that place infants and children at developmental, behavioral, and learning risk.

Intervention plans must address the mental health needs of children. A continuum of services should be available — from the inclusion of mental health principles in the classroom to individual therapy for the child. To adequately meet this challenge, expanded teacher training, mental health consultation in the classroom, school psychological services, and community mental health services are necessary.

Infant-Family Intervention Services

There is no question that school comes too late for the child at risk. Most probably, the critical period for early intervention services occurs in the first six months when the bond between mother or primary caregiver and child is in the process of formation.

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Infant/toddler prevention and intervention programs need to go beyond the traditional developmental model that addresses gross motor, fine motor, adaptive behavior, language, and daily living skill strategies to one that emphasizes a transactional approach.

A transactional model focuses on mother-child reciprocity, emphasizing infant initiation and maternal responsiveness contingent on an infant's needs. In this way, the infant learns to influence the world, and the mother learns to meet specific needs. A transactional approach helps a mother read her infant's oftentimes muted or sporadic interactive behaviors and to initiative interactions that match her baby's needs. Parents of infants who are substance exposed may also need extra assistance in how to provide a protective environment that will help the vulnerable infant to regulate and modulate behavior and organize experiences.

Protective intervention services for the infant center on positioning, swaddling, soothing, massaging, and protective techniques to help the infant to have calm, organized behavior, and to relate more effectively to the persons and objects daily. Promoting quality mother-infant interaction and providing a protective environment are the key elements for effective intervention for this group of young children.

The number of early intervention program providers identified in California in 1990 was 437. Ninety-two were funded through the Department of Developmental Services, 89 through the Department of Education, 107 from California Childrens Services, 14 from Maternal Child Health Follow-Up Projects and 135 from other nonprofit organizations (Hansen, 1990). Schools need to work collaboratively with these agencies to ensure that a continuum of service delivery options is available in every community for infants at risk and their families.

Early intervention, family-related services that can be available in each community include:

- Comprehensive interagency case management
- Mother-infant interaction programs
- Parent effectiveness programs

- Family stress management
- Drug recovery/drug testing programs
- Vocational training
- Home management skills
- 24-hour hotline
- Respite care
- Health/mental health service accessibility
- Social service accessibility
- Women, Infant, and Children program accessibility

Schools need to be aware of the resources of their community even if they do not provide the direct service.

Expanded Preschool and Elementary Preventive Education

California Special Education Director Patrick Campbell (1990) stresses the need for programs that call for "every effort to prevent the child from falling behind or not reaching his or her full potential." Chart I details the requisites for kindergarten success and vulnerabilities that may preclude children at risk from attaining their potential. Prevention, intervention, and education programs developed for children prenatally substance exposed will have to respond to this range of biological/psychosocial risk factors and learning disabilities seen in these children.

Because there is no absolute profile of developmental outcome, there can be no absolute service delivery model. When perinatal substance exposure results in behavioral disorganization, behavioral management services are needed by families. Parents may need particular help in providing a protective environment and in promoting quality mother-child interaction.

It is not known at this time how many children prenatally substance exposed will qualify for special education services. Most of these young children will not have behavioral, developmental, psychosocial, or learning difficulties requiring intensive special education services. Children who evidence risk factors will need preschool prevention programs. Many of these children at school age will present learning and behavioral characteristics that continue to place them at risk for success in a regular education program without some extra support.

Most children who have been exposed to substances will not be identified as such unless the natural or foster mother volunteers the information. Program issues are pertinent to all biologically and/or psychosocially children at risk, regardless of etiology. Children at risk benefit from a structured program that allows them to anticipate daily expectations. They need more individual attention from emotionally supportive adults who can help them develop the self-mastery needed for self-esteem. Research has supported the notion that positive child-centered interaction leads to more prosocial behavior into adolescence (Lally, 1988).

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CHART I

Educational Needs of Children at Risk Due to Substance Exposure

Requisite for Success	Vulnerability for Failure
• The initiative to explore, to discover and to learn	• Learning is an aggressive act. Disorganized children who are angry, passive, and/or fearful avoid new challenges, do not persist in difficult tasks and do not seek to learn new things. All their energy is channeled toward coping with the internal and external stresses in their young lives. • Their fear, anger and/or passivity needs to be addressed.
• The capacity to sit for periods of time, to focus, to concentrate and to stay with a task to completion in a group setting	• Children at risk may have difficulty attending, be easily overstimulated and distracted by noise, movement and too many children and things. • They need a protective environment in order to learn.
• The capacity to make and keep friends, to organize their own play and to do tasks on terms other than their own and to size up situations before acting	• Children at risk may be impulsive, disorganized in play, and lack age appropriate social skills. • They need to be *directly* taught and guided in many prosocial and learning competence behaviors that other children learn incidentally.
• The value that significant adults are important sources of direction, guidance, comfort, information, and praise	• The young child who is raised in an at-risk environment may be poorly attached and lack basic trust. The child may appear insecure with low self-esteem. • Poorly attached children do not easily use adults to have their needs met. They do not respond to verbal guidance or verbal praise as one expects. They may constantly test the limits. They may be clingy, dependent, and unable to make decisions. • Self-mastery and self-dependence in learning and daily living skills need to be guided and encouraged. • Teacher-child relationship becomes a key component of intervention for poorly attached children.
• The coping mechanisms to handle the demands of classroom routines, large group activities, peer interactions and teacher expectations, and to help the child deal emotionally with the social, academic and motor performance demands that are a part of all children's lives	• Healthy attachments, family security and an emotionally available parent provide the wherewithal for children to deal with the stresses of everyday life. Children at risk may have biological risks compounded if the surrogate or natural parent is too overwhelmed to meet their emotional needs. They tend to be hypersensitive and hyperreactive to their emotional and sensory environment and have a low tolerance for stress. • Children at risk may show regressive behaviors or catastrophic reactions to seemingly benign events. • They need help in developing coping mechanisms to adaptively handle stress.
• The developmental readiness to handle materials (pencils, balls, blocks), to listen to the teacher, to use language to express ideas, feelings and solve problems, and to discriminate differences among social cues and visual forms	• Children at risk may evidence neurological dysfunction leading to learning vulnerabilities and/or disabilities in auditory processing, spatial-motor competence, problem solving strategy, attention, and concentration. • They need special education strategies within the classroom and/or special education related services.

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The Los Angeles Unified School District has developed specific intervention strategies to meet the learning, play, social/emotional, communication, and motor-spatial needs of preschool children at risk due to substance exposure. An interdisciplinary team composed of school district personnel and a consultant from the University Affiliated Program Childrens Hospital, Los Angeles represented early childhood education, special education, psychology, social work, and pediatric medicine. The team identified behaviors in children at risk that are indicators for early intervention strategies.

Effective classroom strategies addressed the need to provide children at risk with an environment that protects them from overstimulation, unrealistic demands, unpredictable schedules, and hurried transitions within the program.

The following **protective factors** were recommended:

- Demands on the child should be realistic.
- School personnel in the child's life should be consistent.
- Classroom rituals and routines should be predictable.
- Classroom environment should be flexible to allow for reduction of stimuli and/or enrichment of activity.
- Transitions between activities should be well thought out and planned.
- Adult-child ratios should be low enough to promote close relationships and ongoing assistance.
- The individual child's ability to cope with stress, make decisions, deal with change, and relate to peers should be closely observed, assessed, and addressed in the classroom and on the playground.
- Curricula for young children should be based on developmentally appropriate materials and activities.

The team recognized that children at risk also need to be provided with an environment that facilitates the development of close teacher-child relationship, self-esteem, self-mastery, and problem solving strategies.

The following **facilitative factors** were recommended:

- The teacher should acknowledge children's feelings before dealing with nonadaptive behavior.
- Mutual discussion of both positive and negative experiences and feelings should be encouraged.
- Classroom rules should be limited and explicitly stated.
- Teachers should be aware of the importance of their behavior in providing models for their children.
- Children should be encouraged to make decisions for themselves whenever appropriate.

In addition, the team delineated specific strategies that encouraged the emotional-social, learning communication, play, language, and motor-spatial devel-

opment of children at risk. The home-school partnership is recognized as an essential element to effectively meet children's needs (Los Angeles Unified School District, 1989).

... schools should change to fit the needs of children rather than to continue to try to fit children into current programs.

Primary grade curricular issues need to be addressed and reformulated. The 1988 Department of Education's School Readiness Task Force in their publication, *Here They Come: Ready or Not,* stresses that schools should change to fit the needs of children rather than to continue to try to fit children into current programs. Many recommendations of the task force are particularly appropriate for these children at risk including an experiential integrated curriculum, an adult/child ratio of 1 to 12, and parent involvement. Other curricular considerations should include added focus on teacher-child relationship, guided cooperative learning, and direct teaching of prosocial behaviors.

The collaboration model is one of several models recommended by the Department of Education in California. It allows a special education teacher to collaborate with and to model strategies for regular teachers. In addition, the previously discussed comprehensive, interagency collaboration — particularly with mental health, health, child protective services, and developmental services — is essential.

Effective collaboration, however, does not just happen. Participants need training on team ownership, a format for problem solving, an implementation procedure, and time allotment with administrative support. Children at risk take added teacher time and added teacher energy. Staff morale can become an issue if teachers are not supported in their endeavors. Schools need to proactively address this issue — including ongoing mental health consultation regarding teaching strategies and emotional support to protect teachers from burn out.

The multifaceted characteristics of children at risk due to substance exposure calls for continued monitoring from a multidisciplinary and interagency perspective. Multidisciplinary assessment, program planning, and service delivery ideally includes the availability of the following school personnel — teacher, social worker, nurse, psychologist, adaptive physical education teacher, speech therapist — as well as the availability of physician and physical therapist. Members of the school team need to take responsibility for relating to other community agencies and involving the family.

Since children at risk due to substance exposure are more like other children at risk than a separate entity, programs should not be designed that segregate them as the "substance exposed children." It would be neither a pedagogically sound or a socially sensitive decision to label and segregate these children.

California's Response: Intervention Programs and Research

Several programs in California have been selected to illustrate the role schools can take to meet the needs of children who are at risk for learning and behavior problems.

The selected infant, preschool, and elementary school programs incorporate the following:

- Proactive outreach to families, including home visits, phone calls, and/or written communication, etc.
- Involvement of parents in their child's educational program, including classroom participation, teacher-parent conferences, and/or classroom-related activities, etc.
- Support for parent involvement, including child care and/or transportation, etc.
- Parent education and/or support groups offered in the primary language of the parent
- Ongoing interdisciplinary program planning within the educational system (school health, school mental health, general education, and/or special education, adaptive P.E., language specialists, etc.)
- Ongoing interagency involvement and case management health, mental health, developmental services, Head Start, child care, probation, and/or drug and alcohol agencies, etc.)

Program Model for Families with Infants and Toddlers Prenatally Substance Exposed

The Los Angeles Unified School District (LAUSD), Division of Special Education, in collaboration with the Drug and Alcohol Program Office (DAPO) has initiated an early intervention program. The program serves parents, who used drugs during pregnancy and their children ages 0-3 who were prenatally substance exposed.

The goal of the program is to enhance the development of infants who were prenatally substance exposed, while providing opportunities for positive parent-child interaction and communication. The family focus of the program allows for assessment of family needs, stabilization of the family environment, promotion of family maintenance, and assistance to parents in appropriate use of community resources. To gain a better understanding of these infants and their families, ongoing assessments can identify behavioral characteristics of the parents and the infants, difficulties in communication, and effective strategies.

Using a transdisciplinary, transagency approach, services are provided by teachers and assistants, psychiatric social workers, psychologists, and parent educators. Pregnant teens from an adjacent high school assist in the child care component of the program while earning parent education and leadership credit. The following agencies are represented in the service network:

- Los Angeles Department of Children's Services (DCS)
- Regional Center (RC)
- Department of Health Services (DHS)
- Alcohol and Drug Program Office (ADP)
- Local Hospitals
- Early Intervention Program (LAUSD)
- California Childrens Services (CCS)
- Pediatricians
- Department of Mental Health
- Women, Infant, and Children Program (WIC)

Interagency services/staffing program components include:

1. Case Management:
   DCS social workers and regional center psychologists
   - Develop individual family service plan
   - Facilitate/coordinate communication among all agencies that serve the family
   - Chair/serve on multiagency case review team
   - Notify/assist receiving school for transition beginning at age three

2. Early Intervention Home-Based Service:
   LAUSD teacher/community aide
   - Observe child/parent interaction
   - Present activities that are developmentally appropriate
   - Interact with family members to promote infant development through modeling and demonstration
   - Discuss parental concerns
   - Support parents in coping with family needs
   - Assist caregivers to find community resources

3. Early Intervention Center-Based Program:
   LAUSD teacher/social worker/aide
   - Provide access to various developmentally appropriate equipment and materials
   - Provide opportunities for family involvement, including parent education and parent support groups

- Provide transdisciplinary services by therapists, psychologist, and other specialists as appropriate
- Offer participation in play and exploratory activities

4. Occupational/Physical Therapy:
   RC-CCS occupational and physical therapists
   - Demonstrate positioning, feeding and appropriate handling techniques
   - Review the neurological system and its impact on learning

5. Caregiver Support Groups:
   ADP social worker/LAUSD psychologist/ADP drug abuse counselor
   - Expand knowledge of community resources
   - Increase caregiver's knowledge of child development
   - Develop confidence in child-caregiver interactions
   - Reinforce role in individual planning process
   - Reduce child abuse risk
   - Perform urine screening

6. Diagnostics:
   RC-CCS pediatrician/LAUSD psychologist/RC-CCS occupational and physical therapists
   - Provide formal and informal assessment
   - Assess physical status
   - Assess neurological status
   - Assess development

7. Health Care:
   DHS public health nurse, WIC program staff
   - Provide "hands-on care" of infants in the home
   - Develop a nutritional and health program for child

8. Child Care:
   LAUSD teacher/child care worker
   - Provide child care for siblings
   - Supervise children in play activities
   - Provide experiences to promote physical, intellectual, emotional, and social growth
   - Maintain health and safety standards

9. Transportation:
   Regional center funded driver
   - Provide transportation between home and school for caregiver and child
   - Facilitate linkage between home and school

10. DAPO/LAUSD staff development
    - Increase staff expertise
    - Reduce staff burn out
    - Promote teamwork

11. Regional Center Respite Care:
    Regional center funded resources
    - Reduce caregiver stress
    - Reduce child abuse risk

Kindergarten Program for Four-Year-Olds at Risk

Pasadena Unified School District has developed a kindergarten program for four-year-olds based upon developmental principles in order to gain desired long-term effects. The major goals of the program are threefold:

- Each child should develop verbal language skills to make needs, wants, and ideas clearly understood
- Each child should have opportunities to achieve their maximum potential in all areas of development — physical, social, emotional, and intellectual
- Each child's progress should be closely monitored implementing appropriate interventions to avoid failure

The kindergarten program for four-year-old students at risk targets a population of approximately 600 students and was designed to ensure academic achievement as students move through the primary grades. The keystone of the program is an educational experience with unique instructional and auxiliary services. This program for four-year-olds provides:

- Intensive integrated oral language experiences
- Readiness skill development supported by technology
- Research-based effective teaching practices to promote self-esteem
- Parent education classes and parent participation in the classroom
- Auxiliary services including medical/dental appraisals, health education, nutrition, social service coordination, and psychological services

Building upon the four-year-old kindergarten program, the early elementary program focuses on:

- An enriched oral language development model
- Intensive English-as-a-second language (ESL) development for limited English speakers
- Active learning strategies supported by technology
- Alternative strategies including modality instruction and cooperative learning

The staff includes a nurse practitioner, a resource teacher, a speech and language specialist, teachers and aides. Special program components include the following:

- Broadened curricular emphasis
  - use of computers
  - experientially- based activities integrated around themes
  - oral language focus
  - self-esteem focus
  - emphasis on process of learning, not products
- Health and nutrition services
  - dental, hearing, vision, snack and lunch
- Parent involvement
  - home visit, 3 parent conferences per year
  - monthly parent education and 15 hours of parent participation
- Parent education
  - nutrition, child self-esteem, child oral language needs, role of TV, toys, normal development
- Ongoing staff development
  - two weeks in-service and monthly all day meetings

Study of Educational Needs of Prenatally Drug-Exposed Children

In the fall of 1990, the Diagnostic Center for Neurologically Handicapped Children, Northern California, implemented the Classroom Intrauterine Drug-Exposed Research Study Project. The project was designed to study prenatally drug-exposed children and their educational needs. The objectives were:

- to collect and analyze data describing these children — their needs, strengths, and weaknesses
- to identify teaching methods and strategies that most effectively meet the needs of these children
- to develop staff training packages to assist local school districts to prepare for these children

The project was designed with two major components: the assessment component to determine special education eligibility and/or other educational services and the classroom component to provide further assessment and to identify effective teaching methods and strategies.

The project has assessed 45 preschool-aged children to date. All the children were reported as prenatally drug-exposed. A transdisciplinary team composed of a psychologist, speech and language specialist, adaptive physical education specialist, and an educational specialist provides assessment activities utilizing a variety of standardized assessment instruments and strategies as well as a play assessment model. The parent or primary caregiver plays a critical role in the assessment process. The assessment results provide descriptive data and recommendations for educational and related services.

Data continues to be collected and analyzed. A report of the assessment findings including a description of "who these children are" and recommendations for assessment practices will be developed.

SUMMARY

There is no typical profile of the child who has been prenatally exposed to chemical substances. Many will develop as healthy intact children despite prenatal substance exposure. Compounding biological and psychosocial risk factors may impact the organization of the child's behavior, influencing the regulation of self, attachment to caregivers, peer relationships, learning strategies, development of cognitive schemas, attention and concentration, and self-esteem.

The danger of labeling, stereotyping, and segregating children as products of perinatal substance abusing mothers cannot be overestimated. Vulnerabilities seen in children at risk due to perinatal substance exposure are also seen in children at risk due to other prenatal and perinatal insult. Children at risk due to perinatal substance exposure are unique in certain parameters, but, as a whole, they are more like other children at risk than different. There is the danger that a label can engender the self-fulfilling prophecy, that children will eventually become that which their parents/teachers expect them to be. There is also a real danger of stereotyping the mothers and in the subsequent harmful effect it may have on the mother-child dyad and parental self-esteem.

High needs children, who are placed with overwhelmed or inexperienced caregivers not prepared to respond to special needs or who are placed in multiple care settings will develop serious behavior and learning difficulties. Hopefully, most of these children have the capacity to develop age-appropriate interactive behaviors and learning strategies if their high-risk behaviors are addressed at an early age through ongoing, comprehensive intervention services and family support.

Some children will need special day class placement provided by special education. Additionally, some of these children will need special education resource services. Most will fit in the traditional classroom — some with special behavioral and learning needs.

The child's self-esteem and internal capacity to handle stress is as important as behavioral compliance, maturational readiness, and learning abilities when long-term outcomes are analyzed. Protective and facilitative modifications in regular classrooms will be necessary and will require additional support systems for the regular classroom teacher. Schools and other agencies must work closely with parents of children with substance abuse in identifying and meeting the child's needs. The vulnerable, low-threshold child must be helped to better integrate home and school experiences. Together, the family, the school, and the community can begin to meet the challenge.

Children at risk due to perinatal substance exposure are unique in certain parameters, but, as a whole, they are more like other children at risk than different.

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APPENDIX A

Strategies for Healthy Development of Children at Risk

Teachers who develop a strong relationship with the child at risk encourage that child's sense of self, self-mastery, and self-esteem when they:

- provide for individualized adult-child personal interaction as part of each day's routine (touch, eye contact, hugs, cuddling, and/or talking)
- model, encourage, recognize, acknowledge, and respond to the child's expressions of feelings, wants, and needs
- encourage and support self-dependence in self-help, play, and learning activities
- allow the child opportunity to "help" in the classroom as an important member of the group
- provide the children with toys of their own for the day
- model and encourage the re-creation of daily living experiences in representational play
- allow the child to lead in adult/child play on a regular basis
- provide for and encourage decision making
- support the child on difficult tasks
- allow the use of transitional objects
- develop individualized "hello" and "goodbye" rituals between self and child
- encourage and praise all attempts at developmental mastery

Teachers create a protective responsive environment that helps the child at risk learn to organize and regulate their behavior when they:

- work with a consistent team of classroom personnel
- establish classroom routines and rituals to allow the child to anticipate events
- provide and review daily "pictorial reminders" of class routines on a daily basis
- routinely alert the children that an activity will soon be over
- prepare the children for new changes in daily routines or classroom personnel
- protect the children from the overstimulation of materials, people, movement, light, and noise
- provide the child at risk with explicit expectations and recognition of positive behaviors
- set consistent limits on harmful behavior
- match the level of behavioral expectations with the level of the child's behavioral maturity
- help the child recover from stressful situations
- build relaxation in as part of the program
- provide the child at risk with a self-selected plan of respite when the child is feeling overwhelmed
- intervene before problems escalate to out-of-control behavior

Teachers facilitate adaptive functioning in the child at risk when they directly teach those tasks that non-risk children learn incidentally. Teachers help the child at risk learn to compensate for disorganized behaviors when they:

- verbally/nonverbally guide behavior in close proximity with eye contact and/or touch
- model, rehearse, and guide positive peer interactions (turn-taking, prosocial behavior)
- model, rehearse, and guide peer conflict resolution
- help the child at risk appreciate the "cause and effect" of his behavior
- model, rehearse, and guide play activities
- allow the child at risk to practice developmental tasks with tolerance for messiness and dawdling
- help the child at risk focus and attend to all parameters of developmental tasks
- provide verbal and/or nonverbal cues for spatial/motor and problem-solving tasks
- encourage the independent use of alternative problem-solving/task mastery strategies in peer and solitary play
- provide and encourage language to help the child at risk learn to reflect upon a situation before acting (stop-think-act).

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APPENDIX B

Resources for Working with Children Prenatally Exposed to Drugs

Risk Factors for Abused and Neglected Children and Implications for Quality Shelter Care
Childrens Research Institute of Children
P.O. Box 462
Sacramento, CA 95812 $10.00

Today's Challenge: Teaching Strategies for Working with Young Children Prenatally Exposed to Drugs/Alcohol
Phillip Callison
Division of Special Education, Los Angeles Unified School District
450 Grand Avenue
Los Angeles, CA 90012

Here They Come: Ready or Not!
Report of the School Readiness Task Force
California Department of Education
Bureau of Publications, Sales Unit
P.O. Box 271
Sacramento, CA 95812-0271

My Friends and Me (Pre-K and K)
Developing Understanding of Self and Others (K - 4th Grade)
American Guidance Service
Publishers Building, P.O. Box 99
Circle Pines, Minnesota 55014-1796

APPENDIX C

Resources for Developing Interagency Collaboration

Community Collaboration
Personnel Development for Infant Preschool Programs
650 Howe Avenue, Suite 300
Sacramento, CA 95825

Developing a Community Team
American Association of University Affiliated Programs
1234 Massachusetts Avenue, N.W., Suite 813
Washington, D.C. 2005